IN THE CLAIMS:

Please amend claims 1-43 and please add new claims 44-113 as indicated below:

1. (Currently Amended) ~~A lighting~~ An apparatus ~~for producing a beam of light having a luminous flux spectrum emulating that of a beam of light produced by a predetermined light source having an incandescent lamp, such light source being free of a filter that modifies the luminous flux spectrum of the light emitted by the lamp, the apparatus being suitable for use as a part of a lighting fixture and~~ comprising:

a plurality of ~~groups of~~ light-emitting devices~~, each such group configured to emit light having a distinct luminous flux spectrum~~ including at least one first light-emitting device configured to emit first radiation having a first spectrum and at least one second light-emitting device configured to emit second radiation having a second spectrum different than the first spectrum; and

a controller ~~configurable to supply selected amounts of electrical power to~~ configured to control the plurality of ~~groups of~~ light-emitting devices~~, such that the groups cooperate~~ to produce ~~a~~ composite ~~beam of light~~ radiation having ~~a prescribed luminous flux~~ at least one resulting spectrum that ~~has a normalized mean deviation across the visible spectrum of less than about 30% relative to the luminous flux spectrum of a beam of light produced by the predetermined light source to be emulated~~ simulates a desired spectrum corresponding to sample radiation generated by a predetermined light source.

2. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein ~~the quantities of devices included in each of the plurality of groups of light-emitting devices~~ a first quantity of the at least one first light-emitting device and a second quantity of the at least one second light-emitting device are selected such that, if the controller supplies ~~maximum~~ a predetermined electrical power to ~~all of the groups~~ the plurality of light-emitting

devices, then the ~~resulting composite beam of light will have a luminous flux spectrum having a normalized mean deviation across the visible spectrum of less than about 30% relative to the luminous flux spectrum of a beam of light produced by the predetermined light source to be emulated~~ at least one resulting spectrum substantially simulates the desired spectrum.

3. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein ~~the quantities of devices included in each of the plurality of groups of light-emitting devices~~ a first quantity of the at least one first light-emitting device and a second quantity of the at least one second light-emitting device are selected such that, if the controller supplies maximum electrical power to all of the ~~groups~~ plurality of light-emitting devices, then the ~~resulting composite beam of light will have a luminous flux spectrum having a normalized mean deviation across the visible spectrum of less than about 30% relative to the luminous flux spectrum of a beam of light produced by the predetermined light source to be emulated~~ at least one resulting spectrum substantially simulates the desired spectrum~~, as modified by a theoretical superposition of the spectral transmissions of a plurality of color filters~~.

4. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein the controller further is configurable to supply selected amounts of electrical power to the plurality of ~~groups of~~ light-emitting devices~~, such that the groups cooperate to produce a composite beam of light having a prescribed luminous flux spectrum that has a normalized mean deviation across the visible spectrum of less than about 30% relative to the luminous flux spectrum of a beam of light produced by a predetermined light source that~~ such that the at least one resulting spectrum substantially simulates the desired spectrum, wherein the predetermined light source includes at least one of an incandescent lamp ~~and a filter that modifies the luminous flux spectrum of the light emitted by such lamp~~, a fluorescent lamp and a halogen lamp.

5. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein ~~at least two of the plurality of groups of light-emitting devices include different quantities of light-emitting devices~~ a first quantity of the at least one first light-emitting device is different than a second quantity of the at least one second light-emitting device.

6. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein the plurality of ~~groups of~~ light-emitting devices include at least five ~~groups of~~ different light-emitting devices~~, each such group being~~ configured to emit ~~light~~ radiation having ~~a predetermined distinct luminous flux spectrum~~ five different respective spectra.

7. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein the plurality of ~~groups of~~ light-emitting devices include at least eight ~~groups of~~ different light-emitting devices~~, each such group being~~ configured to emit ~~light~~ radiation having ~~a predetermined distinct luminous flux spectrum~~ eight different respective spectra.

8. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein ~~each of~~ the plurality of ~~groups of~~ light-emitting devices includes a plurality of light-emitting diodes (LEDs).

9. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein the plurality of ~~groups of~~ light-emitting devices together comprise an optical assembly that collects the emitted ~~light~~ first and second radiation and projects the composite ~~beam of light~~ radiation from the apparatus.

10. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein the ~~luminous flux~~ controller is configured to control the plurality of light-emitting devices such that the at least one resulting spectrum of the composite ~~beam of light~~ radiation has a normalized mean deviation across the visible spectrum of less than about 25% relative to the

~~luminous flux~~ desired spectrum ~~of a beam of light produced by the predetermined light source to be emulated~~.

11. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein the ~~luminous flux~~ controller is configured to control the plurality of light-emitting devices such that the at least one resulting spectrum of the composite ~~beam of light~~ radiation has a normalized mean deviation across the visible spectrum of less than about 20% relative to the ~~luminous flux~~ desired spectrum ~~of a beam of light produced by the predetermined light source to be emulated~~.

12. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein the ~~luminous flux spectra of the beam of light produced by the lighting apparatus and of the beam of light produced by the predetermined light source to be emulated~~ apparatus is configured such that the at least one resulting spectrum and the desired spectrum are within 5 db of each other across the visible spectrum when the controller supplies prescribed maximum amounts of electrical power to all of the ~~groups of~~ light-emitting devices.

13. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein ~~the predetermined distinct luminous flux spectrum of the light emitted by each of the plurality of groups of light-emitting devices~~ each of the first spectrum and the second spectrum has a spectral half-width of less than about 40 nanometers.

14. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 1, wherein:

~~the distinct luminous flux spectrum of the light emitted by each of the plurality of groups of light-emitting devices~~ each of the first spectrum and the second spectrum has a predetermined peak ~~flux~~ wavelength and a predetermined spectral half-width;

the peak ~~flux~~ wavelength of ~~each of~~ the ~~plurality of groups of light-emitting devices~~ first spectrum is spaced less than about 50 nanometers from the peak ~~flux~~ wavelength of

~~another of the plurality of groups of light-emitting devices~~ the second spectrum; and

the spectral half-width of each of the ~~plurality of groups of light-emitting devices~~ first spectrum and the second spectrum is less than about 40 nanometers.

15. (Currently Amended) A lighting apparatus ~~for producing a beam of colored light having a prescribed luminous flux spectrum, the apparatus being suitable for use as a part of a lighting fixture and~~ comprising:

a plurality of groups of light-emitting devices~~, each such group configured to emit light having a distinct luminous flux spectrum~~ including at least one first light-emitting device group configured to emit first radiation having a first spectrum and at least one second light-emitting device group configured to emit second radiation having a second spectrum different from the first spectrum; and

a controller configurable to supply selected amounts of electrical power to the plurality of groups of light-emitting devices~~, such that the groups cooperate~~ to produce ~~a~~ composite ~~beam of light~~ radiation~~;~~,

wherein the composite ~~beam of light~~ radiation has ~~a prescribed luminous flux~~ at least one resulting spectrum ~~having substantial energy~~ including wavelengths only within a contiguous bandwidth of ~~less than about 200 nanometers~~ a predetermined target range when the controller supplies prescribed maximum amounts of the electrical power to all of the groups of light-emitting devices.

16. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 15, wherein:

each group of light-emitting devices is free of a filter that substantially changes the ~~luminous flux~~ spectrum of its emitted ~~light~~ radiation; and

the controller is configurable to supply selected amounts of the electrical power to the plurality of groups of light-emitting devices, such that the ~~composite beam of light has a prescribed luminous flux spectrum emulating that of~~ at least one resulting spectrum simulates a desired spectrum of a predetermined light source having at least one of an

incandescent lamp, ~~such light source further having an associated filter that modifies the luminous flux spectrum of the light emitted by the lamp~~ a fluorescent lamp, and a halogen lamp.

17. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 16, wherein the ~~luminous flux~~ controller is configured to control the plurality of groups of light-emitting devices such that the at least one resulting spectrum ~~of the composite beam of light~~ has a normalized mean deviation across the visible spectrum of less than about 30% relative to the ~~luminous flux~~ desired spectrum ~~of a beam of light produced by the predetermined light source to be emulated~~.

18. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 16, wherein ~~the~~ respective quantities of devices included in each of the plurality of groups of light-emitting devices are selected such that, if the controller supplies maximum electrical power to all of the groups, then the at least one resulting ~~composite beam of light will have a luminous flux~~ spectrum ~~having~~ has a normalized mean deviation across the visible spectrum of less than about 30% relative to the ~~luminous flux~~ desired spectrum ~~of a theoretical beam of light produced by the predetermined light source, as modified by a theoretical superposition of the spectral transmissions of a plurality of color filters~~.

19. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 15, wherein the ~~composite beam of light produced by the plurality of groups of light-emitting devices has a luminous flux~~ at least one spectrum ~~having substantial energy only in~~ includes significant wavelengths of less than about 600 nanometers when the controller supplies prescribed maximum amounts of electrical power to all of the groups of light-emitting devices.

20. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 15, wherein the ~~composite beam of light produced by the plurality of groups of light-emitting devices has a~~

~~luminous flux~~ at least one resulting spectrum ~~having substantial energy only in~~ includes significant wavelengths of more than about 550 nanometers when the controller supplies prescribed maximum amounts of electrical power to all of the groups of light-emitting devices.

21. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 15, wherein at least two of the plurality of groups of light-emitting devices include different quantities of light-emitting devices.

22. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 15, wherein the plurality of groups of light-emitting devices include at least four groups of light-emitting devices~~, each such group being~~ configured to emit ~~light having a predetermined distinct luminous flux spectrum~~ four different respective spectra.

23. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 15, wherein each of the plurality of groups of light-emitting devices includes a plurality of light-emitting diodes.

24. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 15, wherein:

~~the distinct luminous flux spectrum of the light emitted by each of the plurality of groups of light-emitting devices~~ each of the first spectrum and the second spectrum has a predetermined peak ~~flux~~ wavelength and a predetermined spectral half-width;

the peak ~~flux~~ wavelength of ~~each of~~ the ~~plurality of groups of light-emitting devices~~ the first spectrum is spaced less than about 50 nanometers from the peak ~~flux~~ wavelength of ~~another of the plurality of groups of light-emitting devices~~ the second spectrum; and

the spectral half-width of each of the ~~plurality of groups of light-emitting devices~~ first spectrum and the second spectrum is less than about 40 nanometers.

25. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 15, wherein the ~~composite beam of light has a luminous flux~~ controller is configured to control the plurality of groups of light-emitting devices such that the at least one resulting spectrum ~~having substantial energy~~ includes wavelengths only within a contiguous bandwidth of less than about ~~150~~ 200 nanometers.

26. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 15, wherein no portion of the contiguous ~~flux~~ bandwidth of the at least one resulting spectrum ~~of the composite beam of light~~ has a ~~flux intensity~~ relative power more than 5 db lower than ~~flux intensities at wavelengths both above and below it~~ another portion of the contiguous bandwidth of the at least one resulting spectrum.

27. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 15, wherein no portion of the contiguous ~~flux~~ bandwidth of the at least one resulting spectrum ~~of the composite beam of light~~ has a ~~flux intensity~~ relative power more than 2 db lower than ~~flux intensities at wavelengths both above and below it~~ another portion of the contiguous bandwidth of the at least one resulting spectrum.

28. (Currently Amended) A lighting apparatus ~~for producing a beam of light having a prescribed luminous flux spectrum, the lighting apparatus being suitable for use as a part of a lighting fixture and~~ comprising:

a plurality of groups of light-emitting devices~~, each such group configured to emit light having a distinct luminous flux spectrum, and at least two of the plurality of groups~~ including at least one first group of light-emitting devices configured to emit first radiation having a first spectrum and at least one second group of light-emitting devices configured to emit second radiation having a second spectrum different than the first spectrum, wherein the at least one first group and the at least one second group include substantially different quantities of devices ~~from each other~~; and

a controller ~~configurable to supply selected amounts of electrical power to~~ configured to control the plurality of groups of light-emitting devices~~, such that the groups cooperate~~ to produce ~~a~~ composite ~~beam of light~~ radiation having ~~a prescribed luminous flux~~ at least one resulting spectrum that simulates a desired spectrum corresponding to sample radiation generated by a predetermined light source.

29. (Currently Amended) A lighting apparatus as defined in claim 28, wherein:

each of the plurality of groups of light-emitting devices is free of a filter that substantially changes the ~~luminous flux~~ spectrum of its emitted ~~light; the prescribed luminous flux spectrum is made to emulate that of a beam of light produced by a predetermined light source having an incandescent lamp, such light source being free of a filter that modifies the luminous flux spectrum of the light emitted by the lamp~~ radiation; and

the controller is configurable to supply selected amounts of electrical power to the plurality of groups of light-emitting devices, such that the ~~composite beam of light has a prescribed luminous flux~~ at least one resulting spectrum ~~that~~ has a normalized mean deviation across the visible spectrum of less than about 30% relative to the ~~luminous flux spectrum of a beam of light produced by the predetermined light source to be emulated~~ desired spectrum.

30. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 29, wherein the respective quantities of devices included in each of the plurality of groups of light-emitting devices are selected such that, if the controller supplies prescribed maximum amounts of electrical power to all of the groups, then the at least one resulting ~~composite beam of light will have a luminous flux~~ spectrum ~~having~~ has a normalized mean deviation across the visible spectrum of less than about 30% relative to the ~~luminous flux~~ desired spectrum ~~of a beam of light produced by the predetermined light source to be emulated~~.

31. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 29, wherein the ~~luminous flux spectra of the beam of light produced by the lighting apparatus and of the beam of light produced by the light source to be emulated~~ at least one resulting spectrum and the desired spectrum are within 5 db of each other across the visible spectrum when the controller supplies prescribed maximum amounts of electrical power to all of the groups of light-emitting devices.

32. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 28, wherein:

~~each group of light-emitting devices is free of a filter that substantially changes the luminous flux spectrum of its emitted light; the prescribed luminous flux spectrum is made to emulate that of a beam of light produced by a predetermined light source having an incandescent lamp, such light source further having an associated filter that modifies the luminous flux spectrum of the light emitted by the lamp; and~~

the controller is configurable to supply selected amounts of electrical power to ~~at least two of~~ the plurality of groups of light-emitting devices, such that the ~~composite beam of light has a prescribed luminous flux~~ at least one resulting spectrum ~~that has a normalized mean deviation across the visible spectrum of less than about 30% relative to the luminous flux~~ substantially simulates the desired spectrum ~~of a beam of light produced by the predetermined light source to be emulated~~, wherein the predetermined light source includes at least one of an incandescent source, a fluorescent source, and a halogen source.

33. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 28, wherein the plurality of groups of light-emitting devices include at least four groups of light-emitting devices~~, each such group being~~ configured to emit ~~light~~ radiation having ~~a predetermined distinct luminous flux spectrum~~ four respective different spectra.

34. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 28, wherein each of the plurality of groups of light-emitting devices includes a plurality of light-emitting

diodes.

35. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 28, wherein:

~~the distinct luminous flux spectrum of the light emitted by each of the plurality of groups of light-emitting devices~~ each of the first spectrum and the second spectrum has a predetermined peak ~~flux~~ wavelength and a predetermined spectral half-width;

the peak ~~flux~~ wavelength of ~~each of the plurality of groups of light-emitting devices~~ the first spectrum is spaced less than about 50 nanometers from the peak ~~flux~~ wavelength of ~~another of the plurality of groups of light-emitting devices~~ the second spectrum; and

the spectral half-width of each of the ~~plurality of groups of light-emitting devices~~ first spectrum and the second spectrum is less than about 40 nanometers.

36. (Currently Amended) A lighting apparatus ~~for producing a beam of light having a prescribed luminous flux spectrum, the lighting apparatus being suitable for use as a part of a lighting fixture and~~ comprising:

five or more groups of light-emitting devices~~, wherein each such group is~~ configured to emit ~~light~~ radiation having ~~a distinct luminous flux spectrum~~ five or more respective different spectra; and

a controller configurable to ~~supply selected amounts of electrical power to~~ control the five or more groups of light-emitting devices~~, such that the groups cooperate~~ to produce ~~a~~ composite ~~beam of~~ radiation having ~~a prescribed luminous flux spectrum~~ at least one resulting spectrum that simulates a predetermined desired spectrum.

37. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 36, wherein the five or more groups of light-emitting devices include eight or more groups of light-emitting devices~~, each such group being~~ configured to emit ~~light~~ radiation having ~~a predetermined distinct luminous flux spectrum~~ eight or more respective different spectra.

38. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 36, wherein each of the five or more groups of light-emitting devices includes a plurality of light-emitting diodes.

39. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 36, wherein:

~~the distinct luminous flux spectrum of the light emitted by each of the five or more groups of light-emitting devices~~ each of the respective different spectra has a predetermined peak ~~flux~~ wavelength and a predetermined spectral half-width;

the peak ~~flux~~ wavelength of each of the ~~five or more groups of light-emitting devices~~ respective different spectra is spaced less than about 50 nanometers from the peak ~~flux~~ wavelength of another of the ~~plurality of groups of light-emitting devices~~ respective different spectra; and

the spectral half-width of each of the ~~plurality of groups of light-emitting devices~~ respective different spectra is less than about 40 nanometers.

40. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 36, wherein the five or more groups of light-emitting devices cooperate to emit ~~light~~ radiation spanning substantially the entire visible spectrum.

41. (Currently Amended) A lighting apparatus ~~for producing a beam of light having a prescribed luminous flux spectrum, the lighting apparatus being suitable for use as a part of a lighting fixture and~~ comprising:

three or more groups of light-emitting devices~~, each such group~~ configured to emit ~~light~~ radiation having ~~a distinct luminous flux spectrum with~~ three or more respective different spectra, each of the three or more respective different spectra having a predetermined peak ~~flux~~ wavelength and a predetermined spectral half-width~~;~~,

wherein the peak ~~flux~~ wavelength of each of the three or more ~~groups of light-emitting devices~~ respective different spectra is spaced less than about 50 nanometers from

the peak ~~flux~~ wavelength of another of the ~~groups of light-emitting devices~~ three or more respective different spectra; and

wherein the spectral half-width of each of the three or more ~~groups of light-emitting devices~~ respective different spectra is less than about 40 nanometers; and

a controller configurable to ~~supply selected amounts of electrical power to~~ control the three or more groups of light-emitting devices, such that the groups ~~cooperate to~~ produce ~~a~~ composite ~~beam of light~~ radiation having a ~~prescribed luminous flux~~ resulting spectrum that simulates a predetermined desired spectrum.

42. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 41, wherein the three or more groups of light-emitting devices include eight or more groups of light-emitting devices~~, each such group~~ configured to emit ~~light~~ radiation having ~~a distinct luminous flux spectrum with a predetermined peak flux wavelength and a predetermined spectral half-width~~ eight or more respective different spectra.

43. (Currently Amended) ~~A~~ The lighting apparatus as defined in claim 41, wherein:

each of the plurality of groups of light-emitting devices is free of a filter that substantially changes the ~~luminous flux~~ spectrum of its emitted ~~light; the prescribed luminous flux spectrum is made to emulate that of a beam of light produced by a predetermined light source having an incandescent lamp, such light source being free of a filter that modifies the luminous flux spectrum of the light emitted by the lamp~~ radiation; and

the controller is configurable to supply selected amounts of electrical power to the plurality of groups of light-emitting devices, such that the ~~composite beam of light has a prescribed luminous flux~~ at least one resulting spectrum ~~that~~ has a normalized mean deviation across the visible spectrum of less than about 30% relative to the ~~luminous flux~~ desired spectrum ~~of a beam of light produced by the predetermined light source to be emulated~~.

44. (New) The apparatus of claim 1, wherein the predetermined light source includes at least one incandescent light source.

45. (New) The apparatus of claim 1, wherein the predetermined light source includes at least one fluorescent light source.

46. (New) The apparatus of claim 1, wherein the predetermined light source includes at least one halogen light source.

47. (New) The apparatus of claim 1, wherein the predetermined light source includes ambient outdoor daylight.

48. (New) The apparatus of claim 47, wherein the desired spectrum corresponds essentially to cloudy conditions for the ambient outdoor daylight.

49. (New) The apparatus of claim 47, wherein the desired spectrum corresponds to essentially sunny conditions for the ambient outdoor daylight.

50. (New) The apparatus of claim 47, wherein the desired spectrum corresponds to one of a sunrise and a sunset.

51. (New) The apparatus of claim 1, wherein the predetermined light source includes at least one substantially white light source.

52. (New) The apparatus of claim 51, wherein the predetermined light source includes only one or more substantially white light sources.

53. (New) The apparatus of claim 51, wherein the sample radiation has a predetermined color temperature.

54. (New) The apparatus of claim 53, wherein the controller is configured to control at least one of a first intensity of the first radiation and a second intensity of the second radiation based at least in part on the predetermined color temperature.

55. (New) The apparatus of claim 53, wherein at least one of the first spectrum and the second spectrum is selected based at least in part on the predetermined color temperature.

56. (New) The apparatus of claim 55, wherein the controller is configured to control at least one of a first intensity of the first radiation and a second intensity of the second radiation based at least in part on the predetermined color temperature.

57. (New) The apparatus of claim 55, wherein a first number of the at least one first light-emitting device and a second number of the at least one second light-emitting device are selected based at least in part on the predetermined color temperature.

58. (New) The apparatus of claim 57, wherein the controller is configured to control at least one of a first intensity of the first radiation and a second intensity of the second radiation based at least in part on the predetermined color temperature.

59. (New) The apparatus of claim 53, wherein a first number of the at least one first light-emitting device and a second number of the at least one second light-emitting device are selected based at least in part on the predetermined color temperature.

60. (New) The apparatus of claim 53, wherein the plurality of light emitting devices includes at least one third light-emitting device configured to emit third radiation having a third spectrum different than the first spectrum and the second spectrum.

61. (New) The apparatus of claim 60, wherein the plurality of light emitting devices is configured to generate up to nine different spectra of radiation which combine to produce the composite radiation.

62. (New) The apparatus of claim 53, wherein the plurality of light emitting devices includes a plurality of light emitting diodes (LEDs).

63. (New) The apparatus of claim 62, wherein the plurality of LEDs includes at least one white LED.

64. (New) The apparatus of claim 63, wherein the at least one white LEDs includes at least two white LEDs configured to emit radiation having respectively different spectra.

65. (New) The apparatus of claim 53, further including at least one sensor configured to measure at least one of the composite radiation produced by the apparatus and the sample radiation generated by the predetermined light source and provide at least one corresponding measurement signal to the controller.

66. (New) The apparatus of claim 65, wherein the controller is configured to control the plurality of light emitting devices based on the at least one corresponding measurement signal such that the composite radiation has substantially the predetermined color temperature.

67. (New) The apparatus of claim 66, wherein:

the at least one sensor is configured to measure the composite radiation; and

the controller is configured to control the plurality of light emitting devices such that the composite radiation is stabilized to have the predetermined color temperature.

68. (New) The apparatus of claim 51, wherein the controller is configured to control the plurality of light-emitting devices so as to vary at least one of a color temperature and an intensity of the composite radiation.

69. (New) The apparatus of claim 68, wherein the controller is configured to control the plurality of light-emitting devices so as to vary the color temperature of the composite radiation within a range of from approximately 500 degrees Kelvin to 10,000 degrees Kelvin.

70. (New) The apparatus of claim 69, wherein the controller is configured to vary the color temperature within a range of from approximately 2300 degrees Kelvin to 4500 degrees Kelvin.

71. (New) The apparatus of claim 68, wherein the controller further is configured to control the plurality of light-emitting devices so as to vary both the color temperature and the intensity of the composite radiation.

72. (New) The apparatus of claim 68, further comprising at least one user interface coupled to the controller and configured to facilitate control of at least one of the color temperature and the intensity of the composite radiation.

73. (New) The apparatus of claim 72, wherein the at least one user interface and the controller are configured to facilitate simultaneous control of both the color temperature and the intensity of the composite radiation.

74. (New) The apparatus of claim 68, wherein the plurality of light emitting devices includes at least one third light-emitting device configured to emit third radiation having a third spectrum different than the first spectrum and the second spectrum.

75. (New) The apparatus of claim 74, wherein the plurality of light emitting devices is configured to generate up to nine different spectra of radiation which combine to produce the composite radiation.

76. (New) The apparatus of claim 68, wherein the plurality of light emitting devices includes a plurality of light emitting diodes (LEDs).

77. (New) The apparatus of claim 76, wherein the plurality of LEDs includes at least one white LED.

78. (New) The apparatus of claim 77, wherein the at least one white LEDs includes at least two white LEDs configured to emit radiation having respectively different spectra.

79. (New) The apparatus of claim 68, further including at least one sensor configured to measure at least one of the composite radiation and the sample radiation generated by the predetermined light source and provide at least one corresponding measurement signal to the controller, wherein the controller is configured to control the plurality of light emitting devices based on the at least one corresponding measurement signal.

80. (New) A method, comprising acts of:

A) emitting first radiation having a first spectrum and second radiation having a second spectrum different than the first spectrum; and

B) controlling at least one of a first intensity of the first radiation and a second intensity of the second radiation to produce composite radiation having at least one resulting spectrum that simulates a desired spectrum corresponding to sample radiation generated by a predetermined light source.

81. (New) The method of claim 80, wherein the predetermined light source includes at least one incandescent light source.

82. (New) The method of claim 80, wherein the predetermined light source includes at least one fluorescent light source.

83. (New) The method of claim 80, wherein the predetermined light source includes at least one halogen light source.

84. (New) The method of claim 80, wherein the predetermined light source includes ambient outdoor daylight.

85. (New) The method of claim 84, wherein the desired spectrum corresponds essentially to cloudy conditions for the ambient outdoor daylight.

86. (New) The method of claim 84, wherein the desired spectrum corresponds to essentially sunny conditions for the ambient outdoor daylight.

87. (New) The method of claim 84, wherein the desired spectrum corresponds to one of a sunrise and a sunset.

88. (New) The method of claim 80, wherein the predetermined light source includes at least one substantially white light source.

89. (New) The method of claim 88, wherein the predetermined light source includes only one or more substantially white light sources.

90. (New) The method of claim 88, wherein the sample radiation has a predetermined color temperature.

91. (New) The method of claim 90, wherein the act B) comprises:

controlling at least one of the first intensity of the first radiation and the second intensity of the second radiation based at least in part on the predetermined color temperature.

92. (New) The method of claim 90, wherein the act A) comprises:

selecting at least one of the first spectrum and the second spectrum based at least in part on the predetermined color temperature.

93. (New) The method of claim 92, wherein the act B) comprises:

controlling at least one of the first intensity of the first radiation and the second intensity of the second radiation based at least in part on the predetermined color temperature.

94. (New) The method of claim 90, wherein:

the act A) comprises an act of emitting third radiation having a third spectrum different than the first spectrum and the second spectrum; and

the act B) comprises an act of controlling at least one of the first intensity of the first radiation, the second intensity of the second radiation, and a third intensity of the third radiation to produce the composite radiation.

95. (New) The method of claim 94, wherein the act A) comprises:

emitting up to nine different spectra of radiation which combine to produce the composite radiation.

96. (New) The method of claim 90, wherein the act A) comprises:

emitting the first radiation and the second radiation via a plurality of light emitting diodes (LEDs).

97. (New) The method of claim 96, wherein the plurality of LEDs includes at least one white LED.

98. (New) The method of claim 97, wherein the at least one white LEDs includes at least two white LEDs configured to emit radiation having respectively different spectra.

99. (New) The method of claim 90, further comprising an act of:

C) measuring at least one of the composite radiation and the sample radiation generated by the predetermined light source.

100. (New) The method of claim 99, wherein the act B) includes:

controlling at least one of the first intensity of the first radiation and the second intensity of the second radiation based on the act C) such that the composite radiation has substantially the predetermined color temperature.

101. (New) The method of claim 100, wherein:

the act C) includes an act of measuring the composite radiation; and

the act B) includes an act of controlling at least one of the first intensity of the first radiation and the second intensity of the second radiation such that the composite radiation is stabilized to have the predetermined color temperature.

102. (New) The method of claim 88, wherein the act B) comprises:

B1) controlling at least one of the first intensity of the first radiation and the second intensity of the second radiation so as to vary at least one of a color temperature and an intensity of the composite radiation.

103. (New) The method of claim 102, wherein the act B1) comprises:

controlling at least one of the first intensity of the first radiation and the second intensity of the second radiation so as to vary the color temperature of the composite radiation within a range of from approximately 500 degrees Kelvin to 10,000 degrees Kelvin.

104. (New) The method of claim 103, wherein the act B1) comprises:

controlling at least one of the first intensity of the first radiation and the second intensity of the second radiation so as to vary the color temperature within a range of from approximately 2300 degrees Kelvin to 4500 degrees Kelvin.

105. (New) The method of claim 102, wherein the act B1) comprises:

controlling at least one of the first intensity of the first radiation and the second intensity of the second radiation so as to vary both the color temperature and the intensity of the composite radiation.

106. (New) The method of claim 102, further comprising:

C) controlling at least one of the color temperature and the intensity of the composite radiation via at least one user interface.

107. (New) The method of claim 106, wherein the act C) comprises:

simultaneously controlling both the color temperature and the intensity of the composite radiation via the at least one user interface.

108. (New) The method of claim 102, wherein:

the act A) comprises an act of emitting third radiation having a third spectrum different than the first spectrum and the second spectrum; and

the act B) comprises an act of controlling at least one of the first intensity of the first radiation, the second intensity of the second radiation, and a third intensity of the third radiation to produce the composite radiation.

109. (New) The method of claim 108, wherein the act A) comprises:

emitting up to nine different spectra of radiation which combine to produce the composite radiation.

110. (New) The method of claim 102, wherein the act A) comprises:

emitting the first radiation and the second radiation via a plurality of light emitting diodes (LEDs).

111. (New) The method of claim 110, wherein the plurality of LEDs includes at least one white LED.

112. (New) The method of claim 111, wherein the at least one white LEDs includes at least two white LEDs configured to emit radiation having respectively different spectra.

113. (New) The method of claim 102, further comprising:

measuring at least one of the composite radiation and the sample radiation generated by the predetermined light source; and

controlling at least one of the first intensity of the first radiation and the second intensity of the second radiation based at least in part on the at least one corresponding measurement signal.